



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D350-636-012
Job Sheet 178947



Part No: D350-636-012

Job Qty: 1 ea

Part Name: Skidtubes RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/11/18

Job Tracking No:

Due Date: 7/6/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG D3492 REV E SHEET 1, D2750-042 REV G SHEETS 1,2,5,9 IPP Rev:I 02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP Rev:K 06-07.13 As per dsi9343 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC IPP Rev:M 08-04-22 DD verified:EC IPP Rev:N 08-09-23 revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-010 DD verf:EC IPP Rev:P 10.06.22 revise seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH DDverf:EC IPP REV:R 13.08.27 PER ECN13-594 DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		7/6/18	0.00	0.00	Start Up Skidtubes-1		
110	Skidtubes	1 pcs		7/6/18	0.00	4.36	Skidtubes-4		
120	QC	1 pcs		7/6/18	0.00	0.00	QC10		
130	QC	1 pcs		7/6/18	0.00	0.00	QC5		
140	HandFinish	1 pcs		7/6/18	0.00	0.91	HandFinish1		
150	QC	1 pcs		7/6/18	0.00	0.00	QC7-2		
160	Skidtubes	1 pcs		7/6/18	0.00	4.36	Skidtubes-1		
170	QC	1 pcs		7/6/18	0.00	0.00	QC10		
180	QC	1 pcs		7/6/18	0.00	0.00	QC5		
190	HandFinish	1 pcs		7/6/18	0.00	0.91	HandFinish2		
200	SprayPaint	1 pcs		7/6/18	0.00	0.69	Spray Paint		
205	Outsource	1 pcs		7/6/18			ATE003-VC		
210	QC	1 pcs		7/6/18	0.00	0.00	QC14		
230	HandFinish	1 pcs		7/6/18	0.00	0.91	HandFinish4		
240	QC	1 pcs		7/6/18	0.00	0.00	QC5		
250	Packaging	1 pcs		7/6/18	0.00	0.00	Packaging1-3		
260	QC	1 pcs		7/6/18	0.00	0.00	QC4		
270	Packaging	1 pcs		7/6/18	0.00	0.00	Packaging3-1		
275	DC	1 pcs		7/6/18	0.00	0.00	DC		
280	QC21-FG	1 Ea		7/6/18	0.00	0.00	QC21		

Part Op 110 - 1- Pick D2600-3 Bent Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & Descriptions: DT8863A for second side only DT8863B for first side (detail K) 4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 7- Open up holes of Detail J to 0.297" (total of 2 holes per side) 8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 9- Grind welds flush as per Dwg D2750

160 - 1- Open up holes of Detail L using hole saw and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2- Open up holes of Detail K using hole saw to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float holes using uni-bit to .500" (4 per Side) 4- Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9) 5- Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7- Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: exp. date: **ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)** 8- Weld spacers D3490-1, D3490-3

DQA: _____ Date: _____
QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐



Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS	
Part No. _____		Rework ☐ Scrap ☐ Use-as-is ☐		Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐	
NCR No. _____		Suspected Unapproved ☐		Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐	
Date: _____		Step #: _____		QTY Effective: _____	
Description Work Order Deviation		Disposition		Completed By	
				MRB (QS1042) Approval	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	

AULT CATEGORY	
Power Loss/Surge ☐	Positioned Wrong ☐
Folio/Program ☐	Outside Dimensions ☐
Grain ☐	Over/Under tolerance ☐
Weld ☐	Part Incorrect ☐
Wrong Stock Pulled ☐	Part Lost/Missing ☐
Out of Sequence ☐	Part Moved ☐
Off-set ☐	Drawing ☐
Mislabeled ☐	Finish ☐
Fit/Function ☐	Misread ☐
Misaligned/off center ☐	Turning Sequence ☐

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 832-5200
Email: sales@dartaero.com
www.dartaerospace.com



Container No: S082691



Part: D350-636-012

Job No: 178947

Serial No/Batch: S082691

Revision:
Inspector:
Exp Date:
Instructions:

Date: 06/20/18

and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9) A/R Aluminum Rod batch: 138834 9- At section AP-AP drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11- Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12- Deburr holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: 5084461 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 138886

210 - Inspect for foreign object per QSI 024

230 - 1-Install inserts as per dwg D2750 2-Inspect for Foreign Objects 3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750 SIKAFLEX 241 BATCH: 1113018 EXP DATE: 12/12

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: 14138823 5-Coat all exposed fasteners with "LPS Procyon" batch: 11133540

270 - Package as per PPP D350-636-012

275 - record fwd angle: 89.6 Photocopy blue file and type labels per PPP D350-636-012 CHG 007

Job BOM

004625

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-RH	Extrusion Bent RH	1 Ea (1 ea)	90-Start up Operation	5081485
D2744	Cap	1 Ea (1 ea)	110-Skidtubes	5063692
D2739	350 I-Beam	1 Ea (1 ea)	160-Skidtubes	5070760
D2743	Crossbolt Spacer	8 Ea (8 ea)	160-Skidtubes	5082601
D3490-1	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5065863
D3490-3	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5066234
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-HandFinish	5058139
AN3C5A	Bolt	34 Ea (34 ea)	230-HandFinish	5057163
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	5076000
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	5066333-1
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	501137203
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	5091818
D3488-042	Blade Fitting RH	1 Ea (1 ea)	230-HandFinish	5070290
D3492-1	Plug	8 Ea (8 ea)	230-HandFinish	5077552
D3492-3	Plug	8 Ea (8 ea)	230-HandFinish	5091849
D3535-25	Wearplate Center	1 Ea (1 ea)	230-HandFinish	5080364
D3536-25	Gasket Center	1 Ea (1 ea)	230-HandFinish	5081331
D3537-1	Wearpad	3 Ea (3 ea)	230-HandFinish	5070789
D3631-1	Washer	8 Ea (8 ea)	230-HandFinish	5058407
D3791-1	Wearpad	1 Ea (1 ea)	230-HandFinish	5071379
D3793-1	Wearplate Fwd	1 Ea (1 ea)	230-HandFinish	*5089345
D3793-3	Wearplate Aft	1 Ea (1 ea)	230-HandFinish	5072081
D3794-1	Gasket Fwd	1 Ea (1 ea)	230-HandFinish	504613
D3794-3	Gasket Aft	1 Ea (1 ea)	230-HandFinish	5083545
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	505046-1
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	5056493
NAS1149C0332R	Washer	38 Ea (38 ea)	230-HandFinish	M1138404-121
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	5036714
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	5049970
NAS1611-010	O-Ring	8 Ea (8 ea)	230-HandFinish	5077839
NAS1611-013	O-Ring	8 Ea (8 ea)	230-HandFinish	5077839
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging	5083553
D2741	Replacement Blade	1 Ea (1 ea)	250-Packaging	5083553
D3493-1	Washer	2 Ea (2 ea)	250-Packaging	5095455
D3532-1	Spacer	2 Ea (2 ea)	250-Packaging	5090421
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging	5050046
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging	5025635

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-RH	1	11	0
110-Skidtubes	D2744	1	77	0
160-Skidtubes	D2739	1	9	0
	D2743	8	78	0
	D3490-1	4	124	0
	D3490-3	4	103	0

230-HandFinish

ALS4-1032-225	38	4,690	0
AN3C5A	34	1,863	0
AN3C6A	4	432	0
AN6C44A	4	323	0
AN8C35A	1	55	0
D2745	8	57	0
D3488-042	1	9	0
D3492-1	8	328	0
D3492-3	8	159	0
D3535-25	1	15	0
D3536-25	1	22	0
D3537-1	3	116	0
D3631-1	8	875	0
D3791-1	1	27	0
D3793-1	1	20	0
D3793-3	1	20	0
D3794-1	1	46	0
D3794-3	1	20	0
MS21043-6	4	208	0
MS21083C8	1	109	0
NAS1149C0332R	38	5,937	0
NAS1149C0832R	1	447	0
NAS1515H3L	4	171	0
NAS1611-010	8	509	0
NAS1611-013	8	405	0
AN8C21A	2	102	0
D2741	1	78	0
D3493-1	2	43	0
D3532-1	2	26	0
MS21083C8	2	109	0
NAS1149D0863J	2	93	0

250-Packaging

Part Specifications

Specifications could not be found.

Plex 6/11/18 10:45 AM Dart.lajeunesse.marie

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALST-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

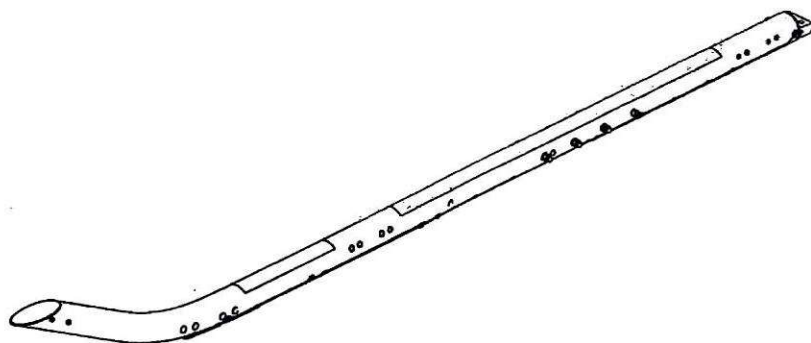
- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
 STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
 OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
 BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
 MINIMUM YIELD TENSILE STRENGTH = 35 KSI
 MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
 FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

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WORK ORDER

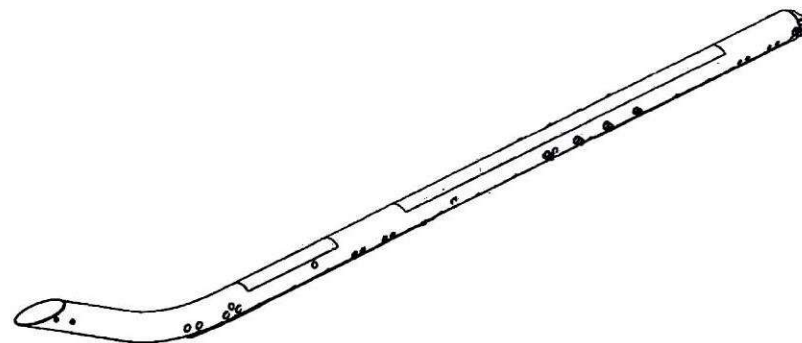
NO. 138947 MJS
180611

RELEASED
2013-08-13
WP

G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS $+0.010/-0.000$, WAS $+0.100/-0.000$ (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/-5-6/-7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PART13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL), WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN	MM	KENT, WA	
CHECKED	MM	DRAWING NO.	REV. G
MFG. APPR.	MM	D2750	SHEET 1 OF 11
APPROVED	MM	TITLE	SCALE
DE APPR.	MM	350 SKIDTUBE ASSEMBLY	NTS
DATE	13.07.11	COPYRIGHT © 1999 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRELIMINARY AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



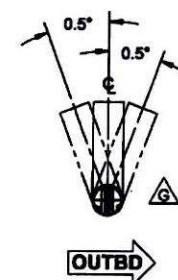
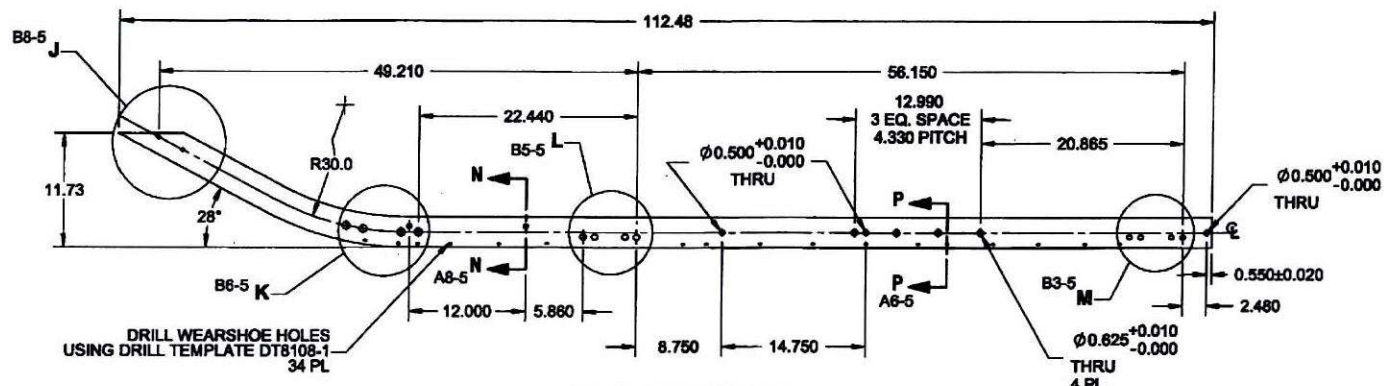
D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

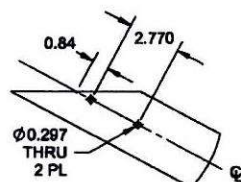
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2013-08-13

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO. D2750	REV. G
MFG. APPR.		SHEET 2 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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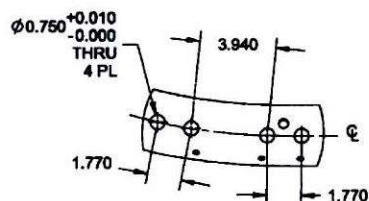


MAX ALLOWABLE
TWIST ON FWD BEND
(VIEWED LOOKING FWD)

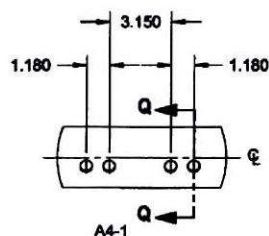
D2750-2 RH SKIDTUBE



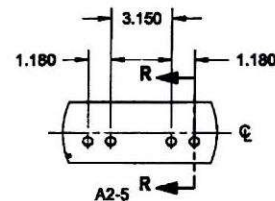
D8-5
DETAIL J
SCALE 2X



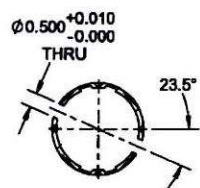
C7-5
DETAIL K
SCALE 2X



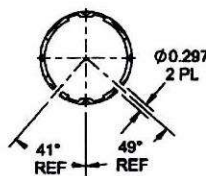
D8-5
DETAIL L
SCALE 2X



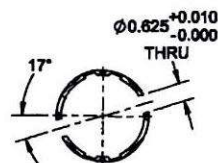
C3-5
DETAIL M
SCALE 2X



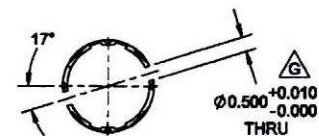
C6-5
SECTION N-N
SCALE 3X, 2 PL



C4-5
SECTION P-P
SCALE 3X, 17 PL



B5-5
SECTION Q-Q
SCALE 3X, 4 PL



B3-5
SECTION R-R
SCALE 3X, 4 PL

DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO. D2750	REV. G
MFG. APPR.		SHEET 5 OF 11	
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	
DATE	13.07.11	NTS	

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RELEASED
2013-08-13

Kim Johnston

From: Linda Lacelle
Sent: Wednesday, July 25, 2018 3:29 PM
To: Kim Johnston; Michelle GagnonDonovan; Marie Lajeunesse
Cc: Jason Leroux; Jean-Luc Menard; Sonia Quirion
Subject: paperwork and labels

We have a crew doing OT in pkg and will need paperwork and labels asap for:

1 x D350-636-011 S076433
1 x D350-636-011 S077013
1 x D350-636-011 S079796
1 x D350-636-011 S080003
1 X D350-636-011 S075112
1 X D350-636-011 S076724

1 x D350-636-012 S080833
1 x D350-636-012 S080716
1 x D350-636-012 S080884
1 x D350-636-012 S082691

1 X D119-646-241 S059730
1 X D119-646-241 S059716

MORE TO COME TOMORROW

